

#### **ABSTRACT OF DISCLOSURE**

An apparatus and a process for reclaiming fuel oils from waste oils. The apparatus and process is characterized in that waste oils are thermally cracked by combination of high pressure and vacuum in a sequence at high temperature. However, rapid thermal cracking is performed at even lower temperature of 300 ~ 350 °C than at 400 ~ 450 °C of conventional batch method. The semi-continuous method with bleeding process is employed and accordingly no pause stage becomes necessary to physically collect ash cake from the thermal cracking vessel as experienced from the conventional batch process. The ash cake contents drops from 5% of conventional method to 1.4% since slow reaction is a cause for oxidation problem which is related with formation of tar compounds and production rate of #2 diesel fuel oil increases 3 times more than batch process.